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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/785,041	02/13/2001	David M. Kramer	WSUR116735	4731

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CHRISTENSEN, O'CONNOR, JOHNSON, KINDNESS, PLLC
1420 FIFTH AVENUE
SUITE 2800
SEATTLE, WA 98101-2347

EXAMINER

EVANS, FANNIE L

ART UNIT PAPER NUMBER

2877

DATE MAILED: 09/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/785,041	KRAMER ET AL.	
	Examiner	Art Unit	
	F. L. Evans	2877	

-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 and 18-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14, 15 and 18-32 is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☒ Claim(s) 9-13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) ✓ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>7, 8</u> | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

The Information Disclosure Statements

The prior art cited in the information disclosure statements filed on April 4, 2003 and June 16, 2003 has been considered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 is rejected under 35 U.S.C. § 102(b) as being clearly anticipated by Alexay et al (US 5,519,219), of record.

Alexay et al disclose a spectrometer comprising a light source (1) and a compound parabolic concentrator (6) for directing intensified and diffused light onto a sample. See Fig. 1 and the text pertaining thereto in column 2. The wherein clause does not add structural limitations to the body of the claim to perform the measurements set forth. The only structural elements set forth in the body of the claim are a light source and a compound parabolic concentrator.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR § 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. § 103(c) and potential 35 U.S.C. § 102(e), (f) or (g) prior art under 35 U.S.C. § 103(a).

Claim 6 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Alexay et al (US 5,519,219).

Alexay et al disclose a spectrometer comprising a light source (1) and a compound parabolic concentrator (6) for directing intensified and diffused light onto a sample. The sample is associated with a mirror (column 1, lines 63-65) to reflect light back through the sample to and through the compound parabolic concentrator (6). The compound parabolic concentrator (6) functions as the claimed first and second compound parabolic concentrators.

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to construct a spectrometer comprising two compound parabolic concentrators, sandwiching the sample, to measure light transmitted through the sample.

Claims 2 and 3 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Alexay et al (US 5,519,219) in view of Keränen et al (US 5,029,245), of record.

Alexay et al disclose a spectrometer comprising a light source (1) and a compound parabolic concentrator (6) for directing intensified and diffused light onto a sample. Alexay et al fail to set forth the nature of the light source.

The use of light emitting diodes as light sources in spectrometers is disclosed by Keränen et al. Applicant's attention is directed to lines 34-37 of column 3.

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to use one or more light emitting diodes as the light source in the spectrometer of Alexay et al because of their low cost and compact size.

Claims 4 and 5 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Alexay et al (US 5,519,219) in view of Butterworth et al (US 6,005,722), of record.

Alexay et al disclose a spectrometer comprising a light source (1) and a compound parabolic concentrator (6) for directing intensified and diffused light onto a sample. Alexay et al fail to set forth the nature of the compound parabolic concentrator (hollow or solid).

In the paragraph bridging columns 5 and 6, Butterworth et al disclose the alternative use of hollow or solid compound parabolic concentrators.

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to use a hollow or solid compound parabolic concentrator in the spectrometer of Alexay et al as evidence by the disclosure of Butterworth et al.

Claims 7 and 8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Alexay et al (US 5,519,219) as applied to claim 6 above, and further in view of Butterworth et al (US 6,005,722).

Alexay et al fail to set forth the nature of the compound parabolic concentrator (hollow or solid).

In the paragraph bridging columns 5 and 6, Butterworth et al disclose the alternative use of hollow or solid compound parabolic concentrators.

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At the time the invention was made, it would have been obvious to one of ordinary skill in the art to use hollow or solid compound parabolic concentrators in the above proposed spectrometer as evidence by the disclosure of Butterworth et al.

Allowable Subject Matter

Claims 14, 15 and 18-32 are allowed over the prior art of record.

As to claim 15, the prior art of record, taken alone or in combination, fails to disclose or render obvious a method for measuring a photosynthesis parameter of a plant leaf using a compound parabolic concentrator as claimed, in combination with the rest of the limitations of the claim.

Response to Arguments

Applicant's arguments filed on June 16, 2003 have been fully considered but they are not persuasive. See the rejection of claim 1 above.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR § 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR § 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however,

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will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Fax/Telephone Numbers

Papers related to this application may be submitted to Technology Center 2800 by facsimile transmission. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The fax numbers for Technology Center 2800 are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

If applicant wishes to send a fax containing a Proposed Amendment for discussion during either a personal interview or a telephone interview then the fax should:

- 1) Contain either the statement "**DRAFT**" or "**PROPOSED AMENDMENT**" on the Fax Cover Sheet; and
- 2) Should be unsigned by the attorney or agent.

This will ensure that the amendment will not be entered into the application and will be forwarded to the examiner as quickly as possible.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to the examiner whose telephone number is (703) 308-4805. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font, can be reached on (703) 308-4881. The TC Receptionist's telephone number is (703) 308-0956.

Any other inquiry of a technical nature, and all inquiries of a general nature including those relating to the status of an application should be directed to TC 2800 Customer Service Office whose telephone number is (703) 306-3329.

**F. L. EVANS
PRIMARY EXAMINER
ART UNIT 2877**

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September 7, 2003